

CLEAN VERSION

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1. (Once Amended) A composition, comprising a 2 to 20 base 3'-OH, 5'-OH synthetic phosphodiester nucleotide sequence selected from the group consisting of $(G_xT_y)_n$, $(T_yG_x)_n$, $a(G_xT_y)_n$, $a(T_yG_x)_n$, $(G_xT_y)_nb$, $(T_yG_x)_nb$, $a(G_xT_y)_nb$, and $a(T_yG_x)_nb$, wherein x and y is an integer between 1 and 7, n is an integer between 1 and 12, a and b are one or more As, Cs, Gs or Ts, and a pharmaceutically acceptable carrier, wherein the composition is useful for inducing a response in an animal having cancer when administered in an effective amount to the animal having cancer.

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7. (Once Amended) The composition of Claim 1, wherein the phosphodiester nucleotide sequence is selected from the group consisting of SEQ ID NOs: 7-18, 23-47, 50-66, and 81-83.

8. (Once Amended) The composition of Claim 1, wherein the phosphodiester nucleotide sequence is selected from the group consisting of SEQ ID NOs: 7-10, 22-65, 70-75, 79 and 80.

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10. (Once Amended) The composition of Claim 5, wherein the chemotherapeutic agent is selected from the group consisting of antimetabolites, alkylating agents and hormone antagonists.

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11. (Once Amended) A method, wherein a composition comprising a 2 to 20 base 3'-OH, 5'-OH phosphodiester nucleotide sequence selected from the group consisting of (G_xT_y)_n, (T_yG_x)_n, a(G_xT_y)_n, a(T_yG_x)_n, (G_xT_y)_nb, (T_yG_x)_nb, a(G_xT_y)_nb, and a(T_yG_x)_nb, wherein x and y is an integer between 1 and 7, n is an integer between 1 and 12, a and b are one or more As, Cs, Gs or Ts, and a pharmaceutically acceptable carrier, is administered to an animal having cancer in an amount effective to induce a response selected from the group consisting of induction of cell cycle arrest, inhibition of proliferation, activation of caspases and induction of apoptosis in cancer cells, and production of cytokines by immune system cells.

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22. (Once Amended) The method of Claim 11, wherein the cytokines are selected from the group consisting of IL-1-beta, IL-6, IL-10, IL-12, and TNF-alpha.

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24. (Once Amended) The method of Claim 23, wherein the cancer is selected from the group consisting of leukemia, lymphoma, breast, prostate, colorectal, ovarian and bone cancer, and metastases therefrom.

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27. (Once Amended) The method of Claim 11, wherein the phosphodiester nucleotide sequence is selected from the group consisting of SEQ ID NOs: 7-18, 23-47, 50-66, and 81-83.

28. (Once Amended) The method of Claim 11, wherein the phosphodiester nucleotide sequence is selected from the group consisting of SEQ ID NOs: 7-10, 22-65, 70-75, and 79.

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42. (Once Amended) The method of Claim 11, wherein the phosphodiester nucleotide sequence is selected from the group consisting of SEQ ID NOs: 9, 10, 23-49, 70-75, and 79.

Please add the following new Claims as follows:

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43. (New) The composition of Claim 4, wherein the sequence is 6 bases.
 44. (New) The composition of Claim 5, wherein the phosphodiester nucleotide sequence is selected from the group consisting of SEQ ID NOs: 9, 10, 23-49, 70-75, and 79.
 45. (New) The method of Claim 14, wherein the sequence is 6 bases.